Notes from the 5/31/05 MI BPM Requirements Meeting
Stephen Wolbers
These notes can be found in Beams docDB #1526.

Nathan Eddy: Beam Line BPM Filter Module

- Nathan's talk can be found in Beams docDB #1849.

- Nathan described the beam line BPM filter module, giving an overview of the signal path from the BPM to the Echotek. There are no amplifiers in the tunnel. The filter module is in a 4U crate in the service buildings, controlled by a module from the Echotek VME crate.

- The board handles both 53MHz and 2.5MHz, and the 53MHz path has two paths (for high and low intensity). A test injection system is also part of the system.

- A mechanical switch is used to switch between the 2.5MHz and the 53MHz signal paths (and the test signals). Solid state switches are used used to go between low and high intensity 53MHz signal paths.

- 5 production boards are made and are being tested. The full system has 50 boards and will be ordered soon for delivery in June.

- There is a fine gain adjustment so that the A and B channels of a BPM can be matched. The 53MHz band pass filter has about a 6 MHz width and rings out quickly enough to allow bunch to bunch measurements for pbar transfers.

- The 4U crates are custom, are ordered but have not yet arrived. It is thought that up to 20 modules could be put in one crate, if the front panels were narrow enough.

- The cost per channel for the system is estimated at about $250.

Manfred Wendt: MI30 test

- Manfred and others are working to establish a test setup in the MI30 building. It consists of 4 channels from one BPM (using split signals), a VME crate + Echotek, a combiner board, and a prototype or production transfer line BPM filter module + necessary controls.

- The goals of this setup are many. To establish signal sizes, test Echotek data-taking schemes (the 4 parallel Graychip scheme), etc.

Manfred Wendt: transfer line BPM filter module for MI BPM?

- Manfred is looking at the schematics for the filter module. He is checking that the dynamic range is matched to MI signals and also looking at different ways to switch 2.5MHz and 53MHz since the mechanical switch is a worry for speed and reliability in the MI.

- The changes contemplated are extensive and will require a full prototype through production cycle.

Manfred : Combiner boxes

- The combiner boxes are more or less designed. If parts were ordered in mid-June then quantities of boards could be in hand some time in August. The goal in any case is to have all 208 boards in hand before the shutdown so that all can be installed during the shutdown.